(11) **EP 1 760 998 A3**

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3: 09.05.2007 Bulletin 2007/19

(51) Int Cl.: **H04M 1/02**^(2006.01)

- (43) Date of publication A2: **07.03.2007 Bulletin 2007/10**
- (21) Application number: 06018254.0
- (22) Date of filing: 31.08.2006
- (84) Designated Contracting States:

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated Extension States:

AL BA HR MK YU

(30) Priority: **02.09.2005** KR **20050081940**

08.09.2005 KR 20050083880 29.09.2005 KR 20050091620

(71) Applicant: LG Electronics Inc.

Yongdungpo-Gu Seoul 150-010 (KR)

- (72) Inventors:
 - Ahn, Byung-Jin Guro-gu Seoul (KR)
 - Ahn, Kwang-Hyun Geumcheon-Gu Seoul (KR)
- (74) Representative: Katérle, Axel Wuesthoff & Wuesthoff Patent- und Rechtsanwälte Schweigerstraße 2 81541 München (DE)
- (54) Foldable mobile communication terminal having a mechanism for automatically opening at various angles
- (57) A mobile communication terminal includes a first body (110), a second body (120) foldably coupled to the first body (110), and an opening mechanism (210) that rotates the second body (120) with respect to the first body (110) in response to a sliding movement of the second body.

FIG. 11A

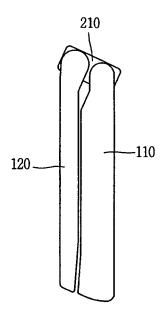


FIG. 11B

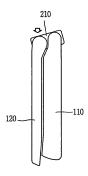


FIG. 11C

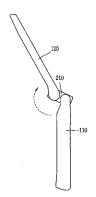
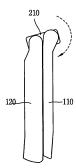


FIG. 11D

FIG. 11E





EUROPEAN SEARCH REPORT

Application Number EP 06 01 8254

		ERED TO BE RELEVAN		01 4001510 4 710 11 05 7117	
Category	Citation of document with ir of relevant pass	ndication, where appropriate, ages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)	
Х	WO 2004/066597 A (M BECCHIO MARCO [IT]) 5 August 2004 (2004	1-4,8, 12,13	INV. H04M1/02		
Υ	* pages 3-8; figure	5-7, 9-11, 14-31			
Υ	W0 2004/013439 A2 ([US]) 12 February 2 * page 3, line 12 - * figures 1-4 *	NAS 5-7,9-11			
Α	US 2005/155182 A1 (AL) 21 July 2005 (2 * paragraphs [0040] * figures 1-9 *	HAN YOUNG-SOO [KR] E 005-07-21) - [0052] *	Т 1-13		
Υ	US 2005/102798 A1 (19 May 2005 (2005-0 * paragraphs [0051] * figures 8,26-28 *	5-19) - [0060] *	14-23, 29-31	TECHNICAL FIELDS SEARCHED (IPC)	
Υ	W0 90/05421 A (MOTO 17 May 1990 (1990-0 * page 6, line 3 - * figures 3,5A,5B *	24-28	H04M		
A	WO 92/17973 A (MOTO 15 October 1992 (19 * page 7, line 1 - * figures 2-5 *	92-10-15)	24-28		
	The present search report has l	peen drawn up for all claims			
	Place of search	Date of completion of the search	ph	Examiner	
	Munich	29 March 2007	Kan	lis, Angelos	
X : part Y : part docu A : tech	ATEGORY OF CITED DOCUMENTS icularly relevant if taken alone icularly relevant if combined with anotiment of the same category inological background written disclosure mediate document	E : earlier pate after the filin ner D : document ci L : document ci	ited in the application ited for other reasons	hed on, or	

EPO FORM 1503 03.82 (P04C01)



Application Number

EP 06 01 8254

CLAIMS INCURRING FEES
The present European patent application comprised at the time of filing more than ten claims.
Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.
LACK OF UNITY OF INVENTION
The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:
see sheet B
All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



LACK OF UNITY OF INVENTION SHEET B

Application Number

EP 06 01 8254

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-13

Foldable mobile communication terminal with an opening mechanism comprising a fixed cam a movable cam and a spring for rotating a second body with respect to a first body of the terminal in response to a sliding movement of the second body.

2. claims: 14-31

Foldable mobile communication terminal with a first body, a second body, an opening mechanism responsive to a sliding movement of the second body and a stopper for holding the second body open at a plurality of angles.

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 06 01 8254

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

29-03-2007

Patent doo cited in sear			Publication date		Patent family member(s)		Publication date
WO 20040	66597	A	05-08-2004	AU CN EP KR	2003299224 1739277 1439685 20050084528	A A1	13-08-20 22-02-20 21-07-20 26-08-20
WO 20040	13439	A2	12-02-2004	AU EP US US	2003259295 1540122 2005257343 2004020012	A2 A1	23-02-2 15-06-2 24-11-2 05-02-2
US 20051	55182	A1	21-07-2005	NON	E		
US 20051	02798	A1	19-05-2005	CN JP KR TW	1610497 2005130073 20050039579 252016	A A	27-04-20 19-05-20 29-04-20 21-03-20
WO 90054	21	A	17-05-1990	AT AU BRACE DE KP ESBRKU JP JP MUS	123609 624437 4410389 8907149 2000264 68922961 159890 0367610 2072909 2224538 3017254 106795 206171 66719 1832012 2159159 5044218 166593 4897873	B2 A A1 D1 T2 A A2 T3 A T3 A B B1 C A B	15-06-19 11-06-19 28-05-19 26-02-19 04-05-19 13-07-19 08-02-19 09-05-19 01-08-19 07-07-19 28-08-19 24-01-19 29-03-19 19-06-19 05-07-19 20-01-19
WO 92179	73	A	15-10-1992	AR CA GB JP JP MX US	246829 2077333 2260163 2718265 5506767 9201333 5185790	A1 A B2 T A1	30-09-1 29-09-1 07-04-1 25-02-1 30-09-1 01-10-1